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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,534	02/25/2004	Nicolai Tarasinski	09163-US	3254
7590	08/22/2005		EXAMINER	
W. Michael Dixon Patent Department DEERE & COMPANY One John Deere Place Moline, IL 61265-8098			LE, DAVID D	
			ART UNIT	PAPER NUMBER
			3681	
			DATE MAILED: 08/22/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/786,534	TARASINSKI, NICOLAI
	Examiner David D. Le	Art Unit 3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 June 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 16,18,21 and 22 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15,17,19 and 20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 February 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25/04, 2/7/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/786,534, filed on 25 February 2004. Claims 1-22 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
- Information Disclosure Statement, received on 02/25/04
 - Foreign Priority Document, received on 02/25/04
 - Declaration and Power of Attorney, received on 05/27/04
 - Information Disclosure Statement, received on 02/07/05

Election/Restrictions

3. Applicant's election without traverse of Species A (Fig. 1), claims 1-15, 17, 19, 20 and 22, in the reply filed on 06 June 2005 is acknowledged. Accordingly, claims 16, 18, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species.

4. Claim 22 is also withdrawn from further consideration because claim 22 is dependent upon a nonelected claim 21.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, an electrical device must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. **The following is a quotation of the first paragraph of 35 U.S.C. 112:**

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 12-15 and 19-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 12:

- Claim 12 recites the limitation “wherein the control arrangement controls the first electrical machine and, if necessary, the second electrical machine *in such a way* that at least one optimizing goal stored in a memory of the control arrangement as input can be reached.” The present specification does not provide, define, or disclose the specific instruction(s) on how the control arrangement obtains or realizes such claimed optimizing goal and stores it in the memory as claimed.

Claim 13:

- Claim 13 recites the limitation “wherein the control arrangement controls the first electrical machine and, if necessary, the second electrical machine *in such a way* that torsional vibrations in a power take-off shaft driveline can be dampeden.” The present specification does not disclose the specific instruction(s) on how the first and second electrical machines should be controlled so that the dampening of torsional vibrations in the power take-off shaft driveline can be achieved.

Claim 14:

- Claim 14 recites the limitation “wherein the transmission of the combination gearbox is designed in such a way that rotational speeds required in a principal operating region of the power take-off shaft lie in a rotational speed region of the internal combustion engine with optimum efficiency, and that a minimum proportion of the power output of the first electrical machine or the second electrical machine must be made available.” The present specification does not disclose or define the specific principal operating region of the power take-off shaft, the specific rotational speed region of the internal combustion engine or the optimum efficiency of the rotational speed region of the internal combustion engine. Accordingly, the present specification does not adequately disclose how the claimed invention can be achieved without undue experimentations. See MPEP §2164 and 2164.1.

Claim 15:

- Claim 15 recites the limitation “wherein the torque of the power take-off shaft can be determined on the basis of the torque generated by the first electrical machine.” The present specification does not adequately disclose specifically how the torque of the power take-off shaft is determined on the basis of the torque generated by the first electrical machine.

Claims 19 and 20:

- Claim 19 recites the limitation “wherein a rotational speed control of the power take-off shaft is provided as a function of a speed of the vehicle.” The present specification does not adequately disclose specifically how the speed of the vehicle being used in order to realize a rotational speed control of the power take-off shaft.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 12-13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12:

- Claim 12 recites the limitation “wherein the control arrangement controls the first electrical machine and, *if necessary*, the second electrical machine *in such a way* that at least one optimizing goal stored in a memory of the control arrangement as input can be reached.” It is unclear whether applicant intends to include the second electrical machine as part of this claimed limitation. Further, it is unclear how the optimizing goal can be realized and stored in the memory.

Claim 13:

- Claim 12 recites the limitation “wherein the control arrangement controls the first electrical machine and, *if necessary*, the second electrical machine *in such a way* that torsional vibrations in a power take-off shaft driveline can be dampeden.” It is unclear whether applicant intends to include the second electrical machine as part of this claimed limitation. Additionally, it is unclear how the dampening of the torsional vibrations in a power take-off shaft driveline can be achieved.

Claim 14:

- Claim 14 recites the limitation “wherein the transmission of the combination gearbox is designed *in such a way* that rotational speeds required in a principal operating region of the power take-off shaft lie in a rotational speed region of the internal combustion engine with optimum efficiency, and that a minimum proportion of the power output of the first electrical machine or the second electrical machine must be made available.” It is unclear, specifically, how to make the minimum proportion of the power output of the first electrical machine or the second electrical machine available.

Claim 15:

- Claim 15 recites the limitations “the torque of the power take-off shaft” and “the torque generated by the first electrical machine”. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-15, 17, and 19-20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,383,106 to Kashiwase.

Claims 1-15, 17, and 19-20:

Kashiwase (i.e., Figs. 1-9; column2, line 61 – column 7, line 19) discloses a power transmitting system for a hybrid vehicle comprising:

- A planetary gearbox (i.e., Fig. 1, element 3);
- A first motor/generator (i.e., Fig. 1, element 4);
- An internal combustion engine (i.e., Fig. 1, element 1);
- A power take-off shaft (i.e., Fig. 1, element 5a);
- A first gearbox interface (i.e., Fig. 1, being the portion of shaft 1a that connects with sun gear 3a of the planetary gearbox) being driven by said engine;
- A second gearbox interface (i.e., Fig. 1, being the shaft portion of said first motor 4 that connects with ring gear 3c of said planetary gearbox);
- A third gearbox interface (i.e., Fig. 1, being the portion of carrier 3b that connects with said power take-off shaft 5a);
- A second motor/generator (i.e., Fig. 1, element 2);

- A control arrangement (i.e., Fig. 1, element 10);
- Wherein said hybrid vehicle inherently includes a wheel brake for stopping said power take-off shaft (5a) (i.e., column 3, lines 37-48);
- Wherein said power transmitting system inherently includes a rectifier, which is associated with each of said first and second motor/generator (i.e., column 4, lines 46-52);
- Wherein the control arrangement inherently uses various sensors to control the engine, the first motor/generator, the second motor/generator, the rectifiers, and the wheel brake (i.e., column 3, line 31 – column 6, line 50);
- Wherein the planetary gearbox (i.e., Fig. 1, element 3) is considered as an infinitely variable torque division gearbox for the power take-off shaft;
- Wherein the control arrangement controls the first motor/generator and, if necessary, the second motor/generator in such a way that at least one optimizing goal stored in a memory of the control arrangement as input can be reached (i.e., column 6, lines 34-50);
- Wherein, since the drive arrangement of Kashiwase'106 is substantially similar to the drive arrangement of the presently disclosed invention, it is inherent that the drive arrangement of Kashiwase'106 can also perform the dampening of torsional vibrations in a power take-off shaft driveline;
- Wherein the transmission of the combination gearbox is designed in such a way that rotational speeds required in a principal operating region of the power take-off shaft lie in a rotational speed region of the internal combustion engine with

optimum efficiency, and that a minimum proportion of the power output of the first motor/generator or the second motor/generator must be made available (i.e., column 6, lines 38-44);

- Wherein the first motor/generator and the second motor/generator supply power to an electrical device (i.e., column 3, lines 37-48); and
- Wherein a rotational speed control of the power take-off shaft is provided as a function of a speed of the vehicle (i.e., column 19-44).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schmidt (U. S. Patent No. 5,577,973) teaches a two-mode, split power, electro-mechanical transmission as shown in Fig. 1.
- Schmidt (U. S. Patent No. 5,669,842) teaches a hybrid power transmission with power take-off apparatus as shown in Fig. 1.
- Yamaguchi (U. S. Patent No. 5,967,940) teaches a drive arrangement as shown in Fig. 1.
- Lilley et al. (U. S. Patent No. 6,455,947) teaches a power combining apparatus for a hybrid electric vehicle as shown in Fig. 2.
- Holmes et al. (U. S. Patent No. 6,551,208) teaches a three-mode, compound-split, electrically variable transmission as shown in Fig. 1.
- Schmidt (U. S. Patent No. 6,662,890) teaches a vehicle transmission as shown in Fig. 2.

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- Kotani (U. S. Patent No. 6,726,592) teaches a drive arrangement for hybrid vehicle as shown in Fig. 1.
- Wakuta et al. (U. S. Patent Application Publication No. US 2004/0084233 A1) teaches a hybrid drive system as shown in Fig. 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ddl


RODNEY H. BONCK
PRIMARY EXAMINER
ART UNIT 3681